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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,604	06/26/2003	Cesar A. Gonzalez	VRT0055US	4147
60429	7590	08/16/2006	EXAMINER	
CSA LLP 4807 SPICEWOOD SPRINGS RD. BLDG. 4, SUITE 201 AUSTIN, TX 78759			DOAN, DUC T	
			ART UNIT	PAPER NUMBER
			2188	

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,604

Applicant(s)

GONZALEZ, CESAR A.

Examiner

Duc T. Doan

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/25/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set for in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/24/06 has been entered.

Claims 1-33 have been presented for examination in this application. In response to the last office action, claims 1,10,12,15-16,18,21-22,24,27-28,30,33 have been amended. As a result, claims 1-33 are now pending in this application.

Claims 1-33 are rejected.

Applicant's arguments filed 05/24/06 have been fully considered with the result as follows,

Claim Objections

Claim 4 recites “.. further comprising said primary storage unit”, however, it does not add any further limitation to the system as recited in claims 1 and 3.

Claim 6 recites “.. further comprising said secondary storage unit”, however, it does not add any further limitation to the system as recited in claims 1-4.

All dependent claims are objected to as having the same deficiencies as the claims they depend from.

Appropriate correction is required.

U.S.C. 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1,10,16,22,26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "said primary storage unit is configured to provide access to data stored on non-removable storage media". Specification's paragraph 26 asserts that hard drive as a non-removeable storage. Examiner respectfully disagrees with the above characterization of harddrive storage devices, that is harddrive being equated to the non-removeable storage. In fact, storage devices such as hard drives can be bolted/resided internally or alternatively be resided externally and conveniently plugged into a system as needed. The difference of external hadrdrive and internal harddrive is mainly the length of the cable to plug these storage devices into the system. Both storage devices inherently have associated codes and processing units to interpret commands (SCSI commands) to access data in its media in specific format of its media. For example the well know SCSI commands have parameter fields to indicate particular media types (tapes, disk etc..) and SCSI specification explains how each device (disk type, tape type) must interprets these commands to access data on its media. In fact, Trimmer's 37's paragraph 31 clearly discloses that both removeable and non-removable disks are known, and are used as primary storages.

The instant disclosure appears to disclose a method to convert or translating instruction from tape device format into a disk device format, whereas the disk device is used as primary storage and the tape device is used as secondary storage. By adding the limitations of non-removeable to the primary storage and removeable to the secondary storage as claimed, it renders the claim indefinite. Baccuse, it is unclear as of the boundary and the intention of the claim wherein, the disks can be both removable and non-removable storage devices. And it's further well known fact, that both disks and tapes are used in both primary and secondary storage.

Claims 16,22,26 are rejected based on the same rationale as of claim 1.

All dependent claim(s) are rejected as having the same deficiencies as the claims they depend from.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4,6 rejected under 35 U.S.C. 102 (e) as being anticipated by Trimmer'39 et al (2004/0153739).

As in claim 1, Trimmer'39 describes a system comprising: a virtual device interface, wherein said virtual device interface is configured to allow a primary storage unit to be accessed using at least one operation that is substantially the same as that used to control a second storage unit (Trimmer'39's paragraphs 14-15 discloses that by using identical commands (ie.using tape device accessing command), host computer #56 can access data in both disk "primary" storages Fig 5: #54 and physical tape "secondary" off site storage), said virtual device interface is coupled to control said primary storage unit and said secondary storage unit (see Trimmer'39's paragraph 15, the virtual tape library system capable of electronically copy data , for example, to local disk storage #54 and to remote off site physical tape library), said primary storage unit is configured to provide access to data stored on non-removable storage media (Trimmer'39's paragraph 31 discloses the "primary" storage devices #54 comprise of non-removeable media such as disks, thus inherently these devices are configured to interpret access command and provide data in their media to requester), and said secondary storage unit is configured to permit access to data stored on the removeable storage media (Trimmer'39's paragraphs 15,21 discloses the off site storage device is a physical tape library that corresponds to the claim's removable storage media. Furthermore, this "secondary storage unit" is inherently capable of interpreting access command and only allowing to access data if the command is in the right format (for example, to access a physical tape media, the access command must be in the format of a physical tape).

As in claims 2-4,6, the claims recite wherein said virtual device interface is further configured to allow a utility to access said primary storage unit as said secondary storage unit

(claim 2); wherein said virtual device interface is a virtual tape interface (claim 3); said primary storage unit (claim 4); a secondary storage unit (claim 6). The claim rejected based on the same rationale as of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5,7,8-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Trimmer et al (US 2004/0153739) as applied to claims 4 in view of Trimmer et al (2004/0111251).

As in claim 5, Trimmer'39 does not expressly disclose the associated software modules to interpret storage access command. However, Trimmer'51 discloses the software modules for the Virtual Tape Library (VTL) as follows:

wherein said virtual tape interface is configured to create a virtual loader on said primary storage unit (Trimmer'51's paragraph 11 discloses the VTL can create/emulate a physical tape device driver (emulation module, corresponding to the claim's virtual loader) for each backend media device. Trimmer'51 paragraphs 32,36 further discloses that the emulation module Fig 2: #58 is capable of interpreting "front end" host accessing commands being issued as tape device

access commands; the emulation module #56 utilizes other modules #59. n to convert these commands into particular commands using for the backend device modules. In other words, the software emulation module can accept host “front end” commands in a first command format (tape command format) and convert to a second command format (disk command format) for the “backend” disk device media. Of course, if the backend devices are physical tape library device, there is not need for this command conversion. It would have been obvious to one of ordinary skill in the art at the time of invention to include the virtual tape library modules and methods as suggested by Trimmer’51 in Trimmer’39 system thereby allowing the host to using one set of command to access the backend device regardless the backend devices are physical tape or physical disks (Trimmer’s51 paragraphs 32,36).

As in claim 7, a virtual loader library, communicatively coupled to said primary storage unit; and a virtual loader utilities module, communicatively coupled to said virtual loader library (Trimmer’51 teaches the VTL communicates with emulation module, and comprising of: utility functions to obtaining information for a given virtual tape library such as current number of slots; Page 2, paragraph 20; Utility functions to operating tape devices such as moving robot arms; Page 3, paragraph 25).

As in claim 8, the claim recites a main module, communicatively coupled to said virtual loader library, and a configuration file, accessible by said main module, wherein said configuration file comprises information that allows said virtual loader library to create a virtual loader on said primary storage unit. The claim rejected based on the same rationale as of claim 7. Trimmer’51 further discloses a configuration file to keep specifications for the emulation module and to configure a virtual tape library accordingly to the specifications; paragraphs 15-17, Fig 1.

As in claim 9, the claim recites said virtual loader library is configured to allow a utility to access said primary storage unit as said secondary storage unit. Trimmer'51 page 3, paragraph 25 further discloses the VTL has code modules to carry out utility functions such as copying data to a backup library.

Claim 10-12,15-18,21-24,27-30,33 rejected under 35 U.S.C. 103(a) as being unpatentable over Trimmer et al (US 2004/0153739) in view of Trimmer et al (2004/0111251).

As in claim 10, the claim rejected based on the same rationale as of claims 1 and 5.

As in claim 11, the claim recites wherein said secondary storage unit is a tape backup unit, and said primary storage unit is a hard drive. The claim rejected based on the same rationale as of claim 10.

Claims 12,18,24,30 rejected based on the same rationale as of claim 5.

As in claim 15, the claim recites wherein said secondary storage unit is communicatively coupled to said virtual tape interface. The claim rejected based on the same rationale as of claim 5.

Claims 16,22,28 rejected based on the same rationale as of claim 10.

Claims 17,23,29 rejected based on the same rationale as of claim 11.

Claims 21,27,33 rejected based on the same rationale as of claim 15.

Claims 13-14,19-20,25-26,31-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Trimmer et al (US 2004/0153739), Trimmer et al (2004/0111251) as applied to claims 12,18,24,30 respectively, and further in view of Anna et al (US Pub 2004/0078639).

As in claims 13-14, the claims rejected based on the same rationale as of claim 5. The claims further recite wherein said creating creates a directory on said hard drive (claim 13); storing information on a virtual tape in said virtual loader, wherein said storing stores information in a file in said directory, and said file corresponds to said virtual tape (claim 14). Trimmer'39 and Trimmer'51 does not describe the claim's detail of a directory. However, Anna describes data of logical volumes in a virtual tape server are stored in files and in directories structures (Anna's page 2, paragraph 20). It would have been obvious to one of ordinary skill in the art at the time of invention to include Anna's file system manager as suggested by Anna in Trimmer'39's system to organizing all the files in a volume in a directory and thereby providing an efficient method of recovering lost or inaccessible data in a volume (Anna's page 4, paragraph 57; page, paragraph 66).

Claims 19-20,25-26,31-32 rejected based on the same rationale as of claims 13-14 correspondingly.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DD


Mano Padmanabhan 8/6/06

Supervisory Patent Examiner

TC2188